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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER

TADESSE, YEWEBDAR T

ART UNIT

PAPER NUMBER

1734

DATE MAILED: 11/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/902,110

Applicant(s)

HOLM ET AL.

Examiner

Yewebdar T Tadesse

Art Unit

1734

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20-30 and 32-44 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 20-30 and 32-44 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Answer to arguments with traverse

1. Applicant's election with traverse of group II is acknowledged in the response filed 09/22/2003. The traversal is on the ground(s) that a serious burden has not been placed on the examiner to consider all of the claims in a single application. This is not found persuasive because the searches for these groups of inventions are not co-extensive. Additionally, burden to the examiner is not only limited to the search of different class/subclasses but also to the recognized divergent subject matter of the invention. The requirement is still deemed proper and is therefore made FINAL. Per applicant's election of group II, claims 20-30 and 32-44 are examined as follow:

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) The invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 20-21, 32-33 are rejected under 35 U.S.C. 102(e) as being anticipated by Prentice et al (US 6,541,063). Prentice et al discloses a system for dispensing viscous

(adhesive or paste medium) onto a substrate, comprising: application means or an applicator (nozzle 112) for applying the medium onto a substrate; inspection means or an inspection device (vision system 130) for inspecting the result of application (inspecting to ensure proper amount of material has been deposited, see column 5, lines 10-14); processing means or processor determining application errors based on the inspection and correction means or a correction device for correcting at least some of the errors (a system having computer control system 120 adjusting a rate of delivery of the metering device and a speed of the movement of the pump when the error value is greater than a predefined value, see column 2 lines 18-39). As to claim 21, Prentice et al's processing means (controller or computer control system 120) having evaluating means for evaluating each of the determined errors and deciding to what extent the determined errors shall be corrected (a controller applying a scale factor to predetermined pattern and adjusting rate of delivery for some error values as described above - apparently the controller is capable of calculating or evaluating).

4. Claims 20, 25, 32 and 38 are rejected under 35 U.S.C. 102(b) as being anticipated by Tanaka et al (US 6,036,994). Tanaka et al discloses (see Figs 1-2) a system for dispensing viscous (paste material) onto a substrate, comprising: application means of screen printing type (screen plate 4) for applying the medium onto a substrate; inspection means (camera 6) for inspecting the result of application (recognizing positions of the pattern); processing means determining application errors based on the inspection and correction means for correcting at least some of the errors

(image processing unit 16 having a function to calculate an amount of movement for correcting the position of the stage based on the data on positions of the pattern recognized by the camera, see column 4, lines 50-63).

5. Claims 20, 26, 32 and 39 are rejected under 35 U.S.C. 102(b) as being anticipated by Radowicz et al (US 6,036,994). Radowicz et al discloses (see Figs 2 and 6, column 12, lines 24-29) a system for dispensing viscous (adhesive material) onto a substrate, comprising: application means of contact dispensing type (glue roller) for applying the medium onto a substrate; inspection means (adhesive detector 220) for inspecting the result of application; processing means determining application errors based on the inspection (control unit panel 602 calculate the amount of time the adhesive and detection system is on-line and the number of defective jointed beams) and correction means for correcting at least some of the errors (imperfection processor 222 taking the defective work pieces off-line to address the issue of defective work pieces capable of having correction means, see column 6, lines 60-63).

6. Claims 27-29, 40-42 and 44, are rejected under 35 U.S.C. 102(b) as being anticipated by Motooka Osamu (JP 02-200376). JP'376 discloses (see English translation Abstract and Fig 1) an apparatus for correcting application errors (an automatic correcting device for solder defect) having a processing means adapted to receive information of the errors in the application of the viscous medium (control section 9 receiving information about defects of the solder applied from the

inspecting device 3 and correction means or a correction device (a solder removing section 5 in communication with the control section 9 through its controller removing excess solder and a dispenser 12 with its control unit supply proper amount of solder paste). Furthermore, JP'376 discloses inspection means (inspecting device 3) for inspecting the solder defect, and the correcting device is capable of being provided in connection with the application of solder paste on a substrate.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 22-24, 34 and 36-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Prentice et al (US 6,541,063) as applied to claims 20 and 32 above and further in view of Ciardella et al (US 5,711,989). Prentice et al discloses a nozzle dispensing drops and or pattern of material in adjusting the delivery rate (performing correction by dispensing more or less material) during dispensing onto a substrate, however Prentice et al lacks teaching the application means of being a jetting means. Yet, dispensing droplets of material using a jetting means is well known in the art; for instance – Ciardella et al discloses (see column 5, lines 3-15 and claim 2) a nozzle assembly jetting viscous medium to form droplet of material. It would have been obvious at the time the invention was made to include jetting means in Prentice et al device to dispense the material at high speed. In claim 22, applicants claim correction means comprising jetting means jetting additional medium and/or (either and or or) removing means for removing surplus medium. In rejecting this claim, examiner applied a correction means comprising jetting means or removing means. Prentice et al's device as modified by Ciardella et al discloses (see above) a correction means comprising jetting means.

10. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Prentice et al (US 6,541,063) as applied to claim 32 above and further in view of Louis Vanyi (US 3,580,462). Prentice et al lacks teaching a correcting device (adjusting application means –nozzle 112) comprising a removing device for removing surplus viscous medium from the substrate. Vanyi discloses a soldering apparatus provided with

dispensing tip having excess coating removal means (see Fig 16). It would have been obvious at the time the invention was made to include excess coating medium in Prentice et al to assure sufficient medium is applied to the work piece.

11. Claims 30 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Motoooka Osamu (JP 02-200376) as applied to claims 27 and 40 above and further in view of Berg et al (US 6,450,416). In JP'376 it is unclear whether the correcting device (nozzle 5) comprises a jetting device. It is well known in the art to jet a solder paste using a jetting means; for instance –Berg et al discloses device for jetting solder paste. It would have been obvious at the time the invention was made to include a jetting device of Berg et al in JP'376 to accurately control the supply of viscous medium as taught by Berg et al (see column 1, lines 46-48). In claim 30, applicants claim correction means comprising jetting means jetting additional medium and/or (either and or or) removing means for removing surplus medium. In rejecting this claim, examiner applied a correction means comprising jetting means or removing means. JP'376 device as modified by Berg et al discloses (see above) a correction means comprising jetting means.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yewebdar T Tadesse whose telephone number is (703) 305-3539. The examiner can normally be reached on Monday-Friday 8:00 AM-4: 30 PM.

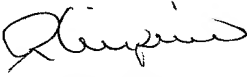
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (703) 308-3853. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Lumbard O.T.
YTT


RICHARD CRISPINO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700